An aerial photograph of a city, likely Chicago, showing a dense urban grid, a large river (the Chicago River) winding through the center, and a complex highway interchange (the Lake Shore Drive Interchange) in the lower right. The image is used as a background for the text.

## V. Creating a Monumental Gateway

**“Make no little plans; they have no magic to stir men’s blood, and probably themselves will not be realized. Make big plans: aim high in hope and work, remembering that a noble, logical diagram once recorded will never die...Let your watchword be order and your beacon beauty.”**

**— Daniel Burnham, architect and member of the McMillan Commission**





View of South Capitol Street from the corner of Eye Street SW

The L'Enfant Plan for the Federal City created a grand physical framework for the new nation's capital. In 1901, the McMillan Commission built upon that vision and formed Washington's Monumental Core. Today, the District and federal governments are working together to craft a plan to guide the city into the 21st century.

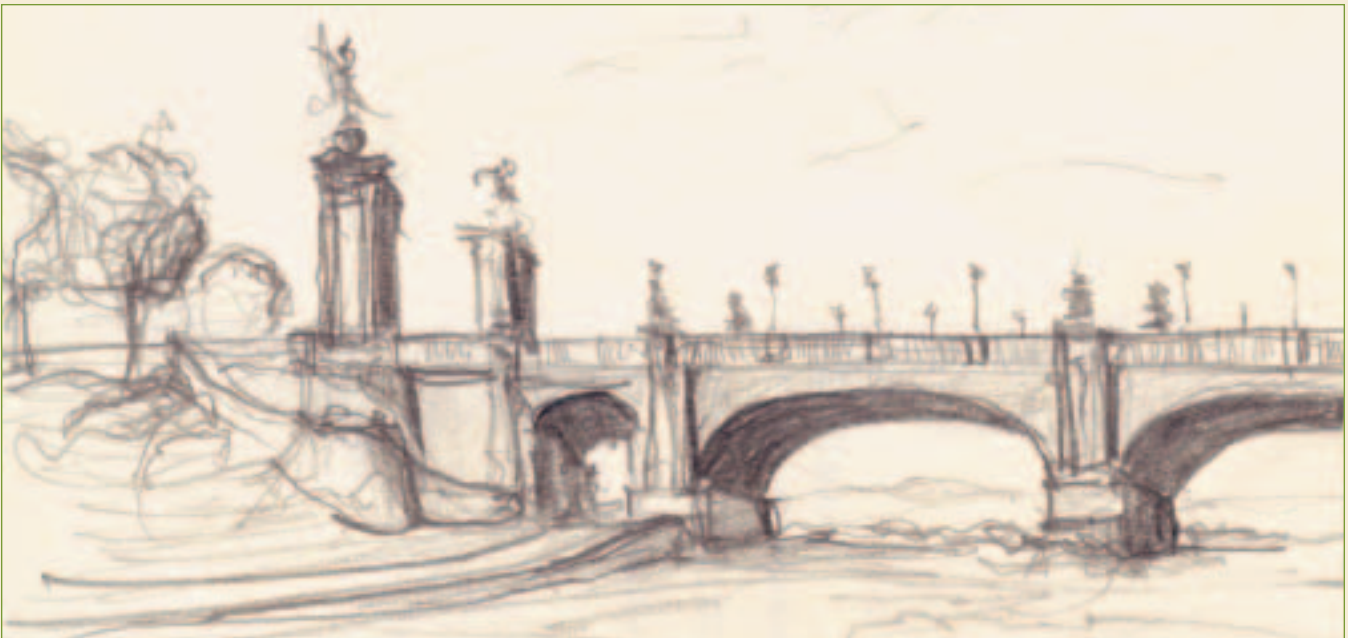
Today, the South Capitol Street corridor is unappealing visually and performs poorly as a transportation network. This study's *Existing Conditions Analysis* contains ample evidence that its decrepit infrastructure warrants immediate attention.

South Capitol Street's current failure as an urban avenue stems largely from its overemphasis on carrying vehicular traffic. When Washington's interstate highway infrastructure was built in the 1960s, moving automobiles in and out of the city took priority over everything else. Making South Capitol Street part of an arterial network, however, has caused many unforeseen problems. Ironically, this is precisely why the corridor does not work today.

Although accommodating automobiles was the only consideration during the heyday of freeway construction, solving South Capitol Street's current transportation problems must be done in conjunction with social, cultural, and economic considerations. The National Capital Planning Commission first proposed balancing transportation improvements with other urban, cultural, and economic concerns in *Extending the Legacy, Planning America's Capital for the 21st Century*. Subsequent planning efforts, including the ongoing Anacostia Waterfront Initiative, combine the full spectrum of transportation, land use, private investment, and social justice.

## V. Creating a Monumental Gateway

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Sketch of a potential South Capitol Street Bridge

The framework for this study's transportation analysis was established in the *South Capitol Street Urban Design Study* with the presentation of three urban design scenarios.

Although more detailed urban design guidelines will be developed in subsequent studies, establishing the visual language of the South Capitol Street gateway early in the planning process is essential. Everything from street widths to the spacing of trees will create the physical framework for a pleasant and inspiring urban environment. The complex interplay of these elements will ensure that the District's streets will function effectively as part of an integrated transportation network.



Scenario A



Scenario B



Scenario C

## South Capitol Street Urban Design Study scenarios

**Scenario A:** The 130-foot street section maintains South Capitol Street's present width, but limits the street to six lanes of moving traffic instead of the current eight lanes. Fewer lanes allows the street to have wider sidewalks and a generous planting strip for healthy trees. The success of this street section depends largely on the construction of a tunnel to accommodate regional through traffic.

**Scenario B:** Expanded 220-foot right-of-way would allow for a green median separating the six-lane boulevard. This center median may be suitable for small-scale memorials. Southbound traffic is directed into a short tunnel before connecting to the bridge.

**Scenario C:** South Capitol Street's combined roadway and public space section would expand to 325 feet, which would include a 140-foot wide park to the east. Several new sites would be created for monuments, memorials, and museums.

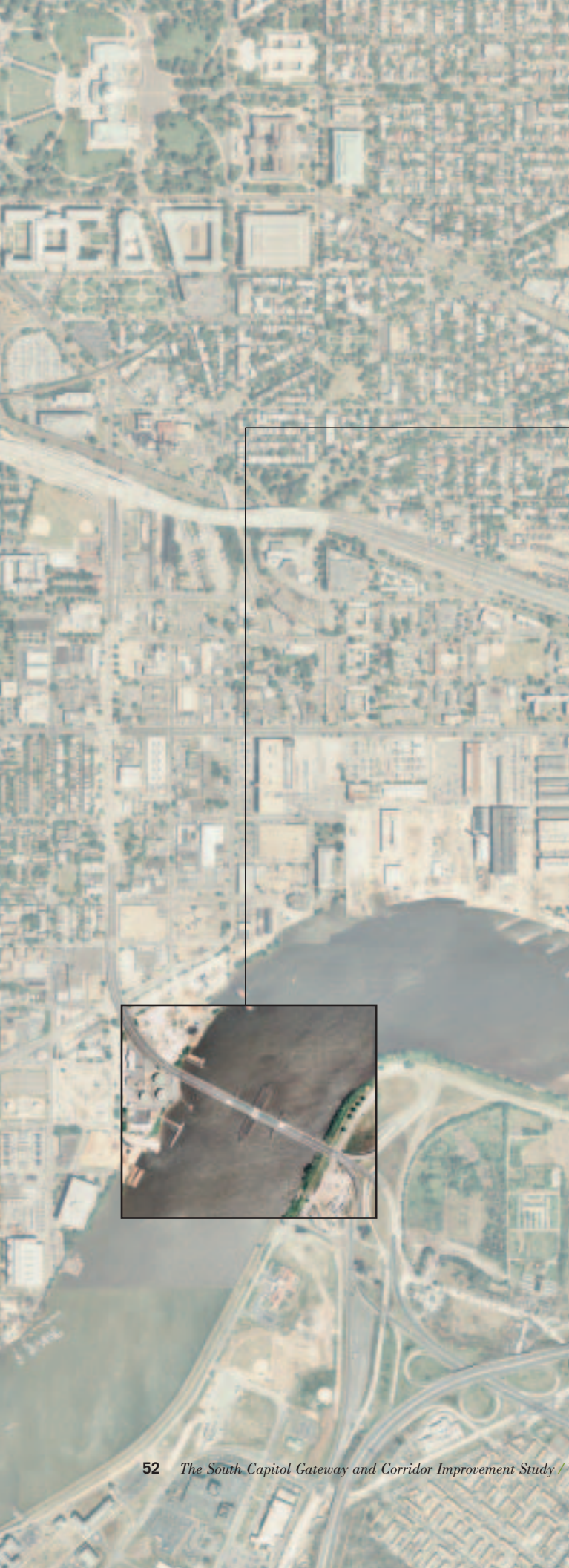




Bridge and roadway improvements mapped onto South Capitol Street Corridor.

## Critical Elements

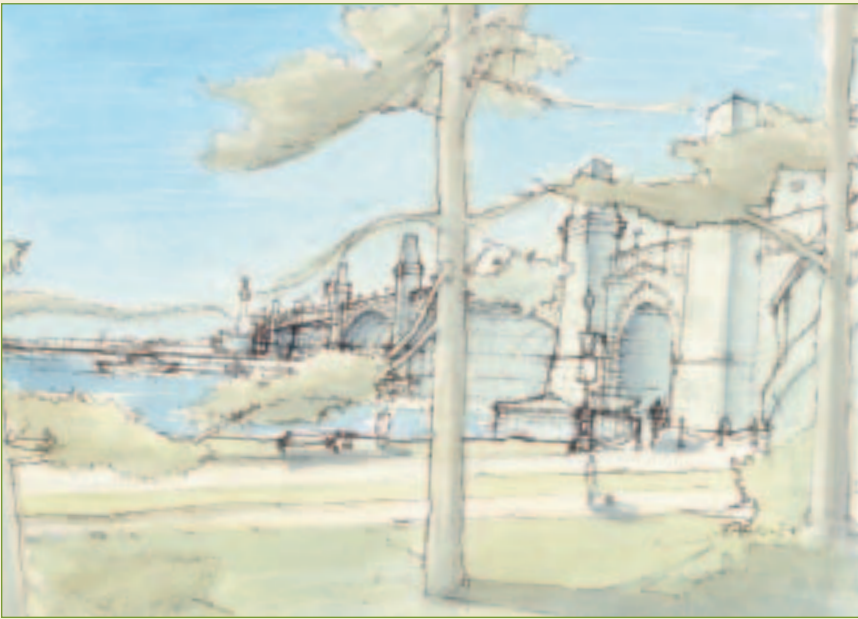
- South Capitol Street is part of a much larger street system that includes Van and Half Streets, New Jersey and Potomac Avenues, and the streets and roadways north of the Anacostia River
- If the new bridge accommodated a transit line, it would improve accessibility and circulation through the corridor
- The new bridge would continue the welcoming quality of South Capitol Street east of the Anacostia River while connecting to Suitland Parkway and I-295
- South Capitol Street and the local street system should be physically distinguished from the regional Interstate system
- Every improvement on South Capitol Street is effectively linked to the other streets throughout the transportation network
- The proposed improvements would allow the restoration of several of L'Enfant's original streets, reconnecting neighborhoods and encouraging multimodality
- The network could include a tunnel to connect I-295 to the I-395/ Center-Leg Freeway that will remove through traffic from South Capitol Street and surrounding neighborhoods
- Transit, bus, surface light rail, and improvements to Metrorail would allow the network to accommodate the future demands of this rapidly changing area





# The New South Capitol Street Bridge

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Perspective of the west bridge abutment at South Capitol Street, which allows access from the new bridge to the parkland along the Anacostia River

The need for a new bridge across the Anacostia River rests at the heart of this study. The Frederick Douglass Memorial Bridge's advanced state of disrepair is documented in the 2002 DDOT *Bridge Inspection Report*. The bridge's height of 45 feet underscores its arterial design. It caters to vehicular traffic but discourages pedestrians and bicyclists. It does not have the structural capacity to handle future transit lines. Most importantly, its freeway design prohibits its participation in urban planning improvements on both sides of the river.

The problems inherent in the bridge's design underscore the need for the new bridge to be fundamentally different. Its success or failure will stem largely from its urban design. Although the bridge's final appearance will not be determined at this point, its essential urban form—the height, width, alignment, and lane and sidewalk dimensions—will establish the physical characteristics of the area's entire street network. These specific design elements will allow the new bridge to channel vehicles, pedestrians, bicyclists, and transit to at-grade streets on both sides of the river.



Key Bridge looking northeast toward Georgetown

Washington, D.C.'s most memorable bridges combine engineering and urban design in structures that function well from a transportation standpoint. They are also as visually compelling as many of the city's most famous monuments.

Key Bridge, which connects Georgetown and Virginia, demonstrates how reinforced concrete construction can be shaped into stately architectural form. Its five segmental arches articulated by an open spandrel make this structure one of the city's great public monuments.

Dumbarton Bridge, which spans Rock Creek Park between Dupont Circle and Georgetown, extends Q Street in a similarly provocative way. Its soaring height is articulated by multiple-arched masonry with a closed spandrel that makes the bridge appear rock-solid. Like Key Bridge, the span of Dumbarton Bridge includes five large arches topped with a decorative row of deep, cantilevered arches supporting the parapet. The bridge's stone belt course runs beneath sculptures of Indian heads wearing full battle dress. The four American bison flanking both ends of the bridge complete the "Buffalo Bridge's" distinctive character.



Dumbarton Bridge curves as it spans Rock Creek Park between Georgetown and Dupont Circle

Memorial Bridge is one of the city's most distinctive spans. Its relatively low height allows the at-grade extension of the Monumental Core across the river. Its axial alignment between the Lincoln Memorial and Arlington National Cemetery provide compelling vistas of these cherished historic places.



Memorial Bridge looking southeast toward the Washington Monument

The bridge's eight reinforced concrete arches clad in granite connect it visually to the monuments to the east of it. The bridge's gracious appearance, connection to local streets, and low height collectively make it a place in and of itself. Although its vehicular lanes can handle high traffic volumes, Memorial Bridge's 15-foot wide sidewalks are used heavily by pedestrians, joggers, and cyclists.

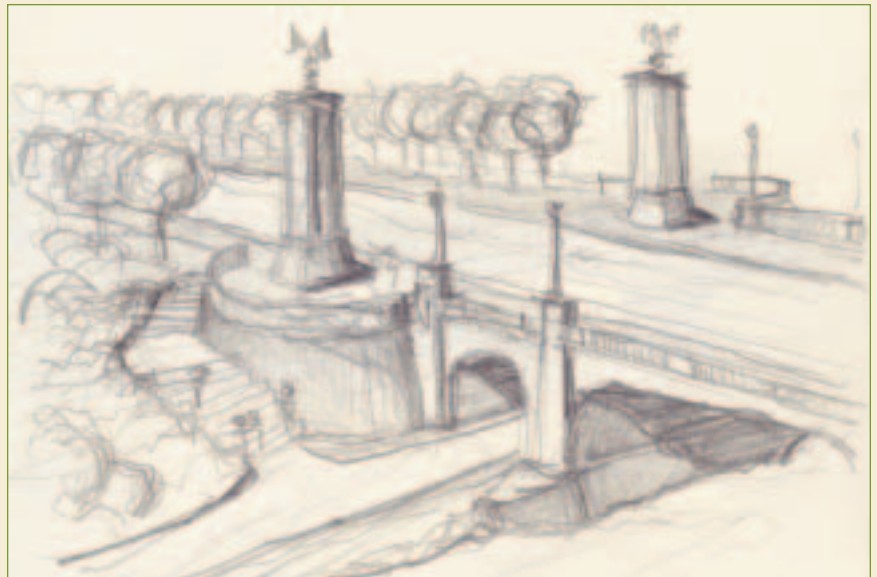
Like Memorial Bridge, the new South Capitol Street span should be aligned perpendicular to the river. This establishes a clear formal relationship between the bridge and the street network to which it connects. Bringing its alignment perpendicular to the shore improves the approach into the city center and provides an axial view of the Washington Monument.

Lowering the bridge allows at-grade connections to the street network on both sides of the river. Unlike the current bridge, which looms above the local streets and catapults vehicular traffic well into the city center, the new bridge's relationship to the river banks will make it perform like a city street rather than a highway. This will facilitate the construction of the Anacostia Riverwalk and create new opportunities for parks and other open spaces.





Conceptual sketch of a potential bridge detail



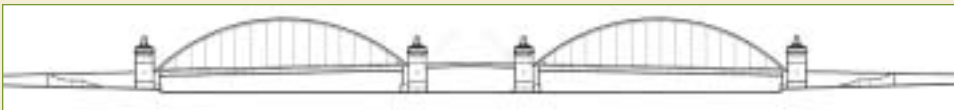
Conceptual sketch of a potential bridge

The success of the Key, Dumbarton, and Memorial Bridges as cohesive urban elements also stems from their successful synthesis of bridge engineering and civic architectural design. Building a bridge with physical characteristics comparable to Washington's finest urban bridges will ensure that the new structure will be a grand civic structure and a welcoming public place.

One of the requirements for the new bridge is that a movable span accommodate vertical clearance in the navigation channel. Preliminary analysis indicates that a swing span is the most feasible option for accommodating the navigation channel due to the proposed lower elevation of the bridge deck. Five potential types that would be appropriate for the new bridge span were identified. These include:



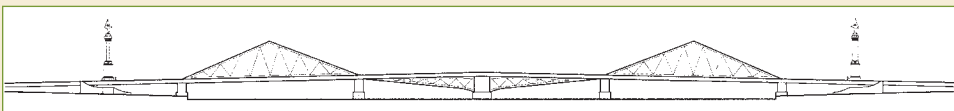
**Cable-supported swing span.** This dramatic use of geometry and cable-stay technology provides a lightweight solution to the movable span.



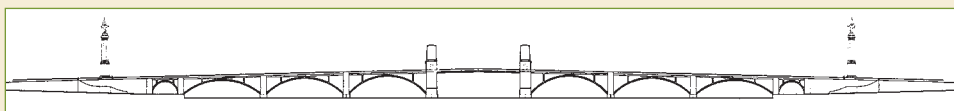
**Through-arch on flanking spans.** This provides vertical dimension of an appropriate scale for the South Capitol Street Corridor.



**Multiple span deck arch, closed spandrel.** This bridge is similar to Memorial Bridge in its height, massing, and articulation. Architectural features could include stone cladding and opportunities for sculpture.



**Triangular truss.** This concept also provides a vertical dimension that may allow elements of the structure to be prefabricated.



**Multiple span arch, open spandrel.** This bridge could be constructed of segmental, prestressed concrete or steel.



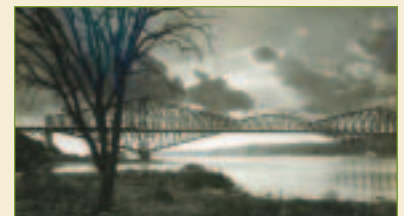
Chesapeake and Delaware Canal.



New Points Bridge, Pittsburg, Pennsylvania



Ponte Vittorio Emanuele II, Rome, Italy



St. Lawrence River, Quebec, Canada



Railway Bridge, Orleans, France



Rendering of Riverwalk from the *Anacostia Waterfront Initiative Framework Plan*

In subsequent studies, the bridge design will be refined. Then it will be evaluated in terms of its function, aesthetic and urban design quality, and environmental impacts. The new bridge will have to accommodate a navigation channel as defined by law.

The channel at South Capitol Street is relatively shallow. The longest spans required will be the two 150-foot navigation channels, so long-span bridge types will not be necessary. Arch spans, the predominant bridge type crossing the Potomac River, would be feasible for the South Capitol Street crossing.

At this time, lowering the bridge's elevation appears to be feasible, as most navigational traffic could be accommodated by a 35-foot vertical clearance. The movable span would have to open at approximately the same frequency as the current swing span.





Perspective of new bridge from Poplar Point



Washington's transportation network is a complex interplay between perpendicular streets and diagonal avenues. Narrower, local streets are intimate in scale, while the broad avenues terminated by public buildings, monuments and memorials convey the city's democratic symbolism. These differing widths establish a hierarchical relationship that allows the city's urban form to work well at large and small scales.

The improvements along the South Capitol Street corridor reflect this configuration. Like Washington's hierarchy of streets, the great streets of cities throughout the world vary in their length, scale, width, and character. But the characteristics that make them wonderful places are remarkably similar. These characteristics, in conjunction with the urban framework established by the L'Enfant Plan, have informed and inspired the urban design for South Capitol Street and its adjacent streets.

Because of its prominence in Washington and its inherent connection to the new bridge spanning the Anacostia River, South Capitol Street's urban form establishes the character that will extend throughout the rest of the transportation system.

## South Capitol Street

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Perspective view up South Capitol from M Street